

CLAIMS:

- Sub 1
1. A cleaning system for the condenser of a refrigeration unit, the system comprising:
 - a compressor including a motor,
 - a condenser,
 - a cooling fan including a fan blade;
 - a motor drive system for driving the fan; and
 - control means for running the fan motor drive system at a first selected speed in a forward direction to direct air toward the condenser for a first predetermined period of time and at a second selected speed in a reverse direction to direct air away from the condenser for a second predetermined period of time, the speed and the time periods being effective to prevent formation of lint on the condenser.
 2. A cleaning system as defined in claim 1, wherein:
 - the first selected speed is less than the second selected speed.
 - ✓ 3. A cleaning system as defined in claim 1, wherein:
 - the first predetermined time period is longer than the second predetermined time period.
 4. A cleaning system as defined in claim 2, wherein:
 - the fan is continuously run at the lower speed and the motor drive system reversed several times a day to run at the higher speed in the opposite direction.

5. A cleaning system as defined in claim 1, wherein:

the first selected speed is about 1500 rpm and the second selected speed is about 2000 rpm.

- ✓ 6. A cleaning system as defined in claim 1, wherein:

the reversing motor drive system is powered directly off terminals associated with the compressor.

7. A cleaning system as defined in claim 1, wherein:

the control means includes a timer.

8. A cleaning system as defined in claim 7, wherein:

the timer causes the motor drive system to run in the reverse direction for about 14 minutes after every 8 hours of compressor running time.

9. A cleaning system as defined in claim 1, wherein:

the reversing motor drive system includes a solid state commutated motor.

10. A cleaning system as defined in claim 9, wherein:

the first selected speed is less than the second selected speed.

11. A cleaning system as defined in claim 10, wherein:

the first selected speed is about 1500 rpm and the second selected speed is about 2000 rpm.

12. A cleaning system as defined in claim 7, wherein:

the reversing motor drive system includes a solid state commutated motor and the timer are electrically connected to terminals of the compressor motor.

13. A cleaning system as defined in claim 1, wherein:

the motor drive system includes a reversible permanent split capacitor motor.

14. A cleaning system as defined in claim 13, wherein:

the first selected speed and the second selected speed are equal.

15. A cleaning system as defined in claim 14, wherein:

the first selected speed and the second selected speed are about 1500 rpm.

16. A kit for retrofitting a refrigerator unit of the type comprising a compressor, a condenser and a motor and a fan blade with a condenser cleaning system, the kit comprising:

a replacement reversible condenser fan motor; and

control means for running the replacement motor at a first selected speed to

direct air toward the condenser for a first predetermined period of time, and in a reverse direction of the motor to direct air away from the condenser at a second selected speed for a second predetermined period of time, the speed and the time periods being effective to prevent formation of lint, the control means including a timer.

17. A kit as defined in claim 16, wherein:

the reversible motor is a solid state commutated motor.

18. A kit as defined in claim 16, wherein:

the reversible motor is a reversible permanent split capacitor motor.

19. A method of retrofitting a refrigerator unit, of the type comprising a compressor, a condenser, a condenser fan having an existing motor and a blade, with a condenser cleaning system including a reversible condenser fan motor and a timer, the method comprising the steps of:

disconnecting a power supply to the refrigerator unit;

disconnecting existing condenser fan motor leads from the compressor;

removing the existing condenser fan motor;

removing the condenser fan blade;

installing the condenser fan blade in the same direction on the reversible condenser fan motor;

installing the reversible condenser fan motor on the refrigerator unit;

connecting the reversible condenser fan motor and timer power leads to the same compressor terminals from which the existing condenser fan motor leads were removed; and

reconnecting the power supply to the refrigerator unit.

connecting the reversible condenser fan motor and timer power leads to the same compressor terminals from which the existing condenser fan motor leads were removed; and

reconnecting the power supply to the refrigerator unit.

leads were removed; and

reconnecting the power supply to the refrigerator unit.